UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Sinclair Oil Company Settlement Information Sheet

Geography: Three refineries:

Tulsa, Oklahoma
Casper, Wyoming
Sinclair, Wyoming

Industry Capacity:

Approximately 160,800 thousand barrels of oil/day
About 1% percent of U.S. domestic refining capacity

Emissions reductions:

Nitrogen oxide (NO_x) reduced by more than 1,100 tons per year
Sulfur dioxide (SO_2) reduced by more than 4,600 tons per year
Additional reductions of volatile organic compounds (VOCs), particulate matter (PM) and other pollutants

Injunctive Relief:

More than $72 million will be spent on injunctive relief through 2012

FCCUs and Heaters and Boilers (NSR/PSD):

- FCCU NO_x limits of 20 ppm (365-day) and 40 ppm (7-day) at the Tulsa refinery, 40/80 ppm for the Sinclair refinery and 50/100 ppm at the Casper refinery.
- FCCU SO_2 limits of 25 ppm (365-day) and 50 ppm (7-day) at all three refineries.
- NO_x and SO_2 continuous emission monitors are required to be installed at all refineries.
- System-wide weighted average NO_x emission limit 0.044 lbs/MMBtu for heaters and boilers greater than 40 MMBtu/hr.
- Particulate emissions limits of 1 pound per 1,000 pounds coke burned at each FCCU.

NSPS and Flaring:

- All flares, heaters and boilers subject to NSPS Subpart J.
- All sulfur recovery plants subject to NSPS Subpart J.
- No fuel oil burning except in limited circumstances.
- A “root cause” analysis for all future flaring events.
- Stipulated penalties for repeated causes of acid gas and tail gas flaring.

Benzene Waste Operations NESHAP:

- Total annual benzene (TAB) less than 10 Mg/yr at the Casper refinery.
- Compliance with the EPA-preferred “6 BQ” benzene compliance option at the Tulsa and Sinclair refineries.

- Modified management of change procedures to ensure that new benzene streams are included in the TAB calculation.
- Conduct laboratory audits.
- Quarterly sampling and TAB calculation.
- Training for those who sample benzene.

Leak Detection and Repair Program:

- NSPS Subpart GGG for each affected facility.
- Training, including refresher courses, for refinery personnel with LDAR responsibility.
- Required LDAR compliance audits.
- Strict internal leak definitions (500 ppm for valves and 2000 ppm for pumps).
- Internal first attempt at repair at 200 ppm for valves.
- More frequent monitoring than required by regulation.

Environmental Benefits:

When all controls are installed, the settlement will result in substantial reductions of the following pollutants:

- **NO_x**, which can cause or contribute to a variety of health problems and adverse environmental impacts, such as ground-level ozone, acid rain, global warming, water quality deterioration, and visual impairment. Affected populations include children, people with lung diseases such as asthma, and exposure to these conditions can cause damage to lung tissue for people who work or exercise outside.

- **SO_2**, which in high concentrations can affect breathing and may aggravate existing respiratory and cardiovascular disease. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children, and the elderly. SO_2 is also a primary contributor to acid deposition, or acid rain.

- **VOCs**, which -- along with NO_x -- plays a major role in the atmospheric reactions that produce ozone, which is the primary constituent of smog. People with lung disease, children, older adults, and people who are active can be affected when ozone levels are unhealthy. Ground-level ozone exposure is linked to a variety of short-term health problems, including lung irritation and difficulty breathing, as well as long-term problems, such as permanent lung damage from repeated exposure, aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses such as pneumonia and bronchitis.

- **PM**, especially fine particles, contain microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. PM is linked to a variety of problems, including increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing, decreased lung function, aggravated asthma, and premature death in people with heart or lung disease.

Penalty: $2.45 million (includes $1.65 million to be paid to participating state partners)

Supplemental Environmental Projects: $150,000

- $100,000 state SEP or diesel retrofits of municipal trash trucks in Tulsa, Oklahoma
- $50,000 for an additional state SEP in Oklahoma to be determined by Sinclair and the Oklahoma Department of Environmental Quality

State Partners: Oklahoma and Wyoming